



DATA SHEET

IM12-04N-N-ZW0

IMN
Inductive proximity sensors

SICK Sensor Intelligence



Illustration may differ

INDUCTIVE PROXIMITY SENSORS

IM12-04N-N-ZW0

ORDERING INFORMATION

Type	part no.
IM12-04N-N-ZW0	6021125

Further device versions and accessories at www.sick.com/IMN



DETAILED TECHNICAL DATA

FEATURES

Housing	Metric
Thread size	M12 x 1
Diameter	Ø 12 mm
Sensing range S_n	4 mm
Safe sensing range S_a	3.24 mm
Installation type	Non-flush
Switching frequency	1,500 Hz
Connection type	Cable, 2-wire, 2 m
Switching output	NAMUR
Switching output detail	NAMUR
Output function	NC
Enclosure rating	IP67 ¹⁾
Special features	ATEX
Special applications	Explosive areas
Items supplied	Mounting nut, brass, nickel-plated (2x)

¹⁾ According to EN 60529.

MECHANICS/ELECTRONICS

Supply voltage	7.5 V DC ... 25 V DC ¹⁾
Hysteresis	1 % ... 15 %
Temperature drift (of S_n)	± 10 %
EMC	According to EN 60947-5-6

¹⁾ When used outside the hazardous area.

²⁾ For connection to a separately certified intrinsically safe circuit only.

³⁾ 1 kΩ.

Current consumption, sensor is activated	≤ 1 mA
Current consumption, sensor is not activated	≥ 2.2 mA
Cable material	PVC
Conductor size	0.34 mm ²
Cable diameter	Ø 4.9 mm
Cable resistance	50 Ω
Shock and vibration resistance	30 g, 11 ms / 10 ... 55 Hz, 1 mm
Ambient operating temperature	-20 °C ... +70 °C
Housing material	Brass, nickel-plated
Sensing face material	Plastic, PTB
Housing length	30 mm
Thread length	25 mm
Tightening torque, max.	7 Nm
Weight	+ 127 g
Type approval certificate	PTB 03 ATEX 2037
Ex area category	1G
Input voltage U _i max.	15 V ²⁾
Input power P _i max.	120 mW ²⁾
Input current I _i max.	50 mA ²⁾
Internal capacitance C _i max.	140 nF ²⁾
Internal inductance L _i max.	130 µH ²⁾
Nominal voltage	8.2 V DC ³⁾
Device labeling	II 1G Ex ia IIC T6 Ga Ta -20 °C ... +70 °C

¹⁾ When used outside the hazardous area.

²⁾ For connection to a separately certified intrinsically safe circuit only.

³⁾ 1 kΩ.

SAFETY-RELATED PARAMETERS

MTTF _D	7,577 years
DC _{avg}	0%
T _M (mission time)	20 years

REDUCTION FACTORS

Note	The values are reference values which may vary
Stainless steel (V2A, 304)	Approx. 0.7
Aluminum (Al)	Approx. 0.4
Copper (Cu)	Approx. 0.3
Brass (Br)	Approx. 0.5

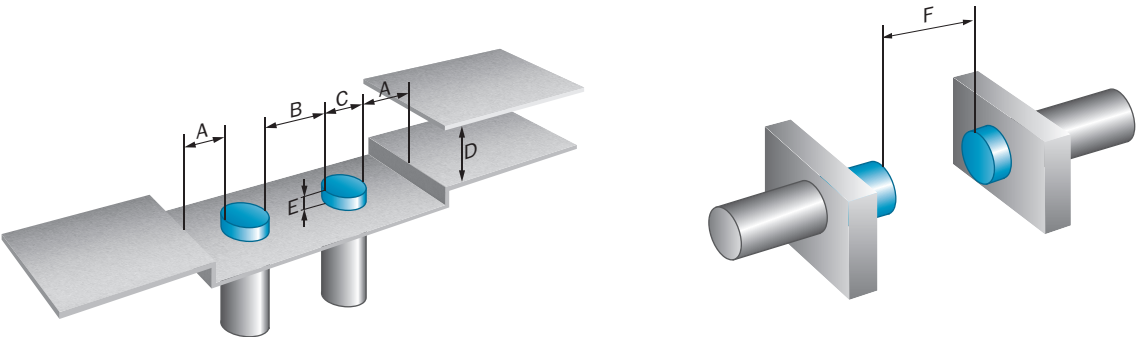
INSTALLATION NOTE

Remark	Associated graphic see "Installation"
A	12 mm
B	24 mm
C	12 mm
D	12 mm
E	8 mm
F	32 mm

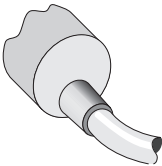
CERTIFICATES

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
CCC certificate	✓
ATEX certificate	✓

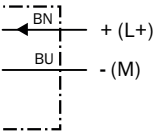
INSTALLATION NOTE NON-FLUSH INSTALLATION



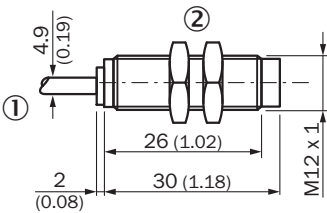
CONNECTION TYPE



CONNECTION DIAGRAM CD-012



DIMENSIONAL DRAWING IM12 NAMUR, NON FLUSH



Dimensions in mm (inch)
① Connection
② Fastening nuts (2x); width across 17, metal

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/6021125



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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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